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ABSTRACT

The feature story in this issue, "Managing the Collaborative Learning Environment," focuses on the growing emphasis on teamwork in the workplace. It discusses how the concept of empowering employees in the workplace is evolving and the benefits--faster decision making, lower costs and absenteeism, higher productivity and quality, and increased profits--of quality circles and self-directed work teams. It emphasizes teachers' need to incorporate collaborative learning strategies into their teaching methods to prepare students for a workplace where they will work in teams. These student benefits are reported: higher academic scores; better communication, higher-level thinking, and social skills; improved student behavior and attendance; and more positive attitude toward school. "Successfully Integrating Collaborative Learning into the Classroom" discusses these elements of effective collaborative learning environments: clear set of learning objectives and precise directions for task completion; student acceptance and support; heterogeneous teams; equal opportunity for success; positive interpersonal skills, attitudes and interdependence; face-to-face interaction; sufficient time for learning and evolution of group dynamics; individual accountability; public recognition and rewards for group success; and post-group reflection on the group process. "Classroom Management Issues" focuses on those skills particularly important to the collaborative learning environment. (YLB)

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Managing the Collaborative Learning Environment

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Keying In

The Newsletter of the National Business Education Association

Volume 13 Number 1 September 2002

MANAGING THE COLLABORATIVE LEARNING ENVIRONMENT

The Growing Emphasis on Teamwork in the Workplace

Asked to comment on the success of General Electric (GE), a 120-year-old, multibusiness company with operations around the globe, former chairman and CEO, Jack Welch, attributed that success to teamwork (Seitz, 2002). The ability of employees to work in teams is becoming increasingly important as global trade grows and companies continue to adopt new technologies and new business practices.

During the industrial revolution, the nation's workers left agricultural employment to take jobs in the industrial and manufacturing sectors. Manufacturing employment's share of the U.S. economy peaked in 1953, at 35 percent, and has been declining ever since. GE, with its beginnings in the production of the first light bulbs and power plants, mirrors the evolution of the economy. Today, it no longer derives most of its revenue from manufacturing goods such as jet engines, refrigerators, or even light bulbs, but from finance operations.

Over the last 30 years, another economic revolution has been taking place. Spencer Kagan (1994), in his book *Cooperative Learning*, observes that our economy is "shifting toward high technology and information-related jobs in which cooperative, interpersonal skills are at a premium" (p. 1:1). Indeed, he notes that it is difficult to imagine a job today that does not involve some cooperative interaction with other individuals. "The most frequent reason individuals are fired from a job is not lack of job-related skills, but rather lack of interpersonal skills," he states (p. 1:1).

The National Association of Colleges and Employers (NACE) has consistently found that employers rank communication and teamwork skills near the top of their list of most desirable skills in prospective employees. "Increasingly," notes Kagan, "the workplace consists of interdependent teams working on complex problems which no individual alone can solve" (p. 2:1).

Quality Circles and Self-Directed Work Teams

Over the past few decades most companies, even those engaged in the traditional manufacturing of goods, have been moving from hierarchical management models toward more flexible and decentralized structures in which managers act more as facilitators and in which employees are expected to assume increased responsibility for achieving organizational goals.

"Empowering employees in the workplace has been evolving over time," observes **Joyce J. Caton**, a senior lecturer in the Education/Special Education Department at Fontbonne University in Saint Louis, Missouri. Employees who make up self-directed

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Successfully Integrating Collaborative Learning Into the Classroom

"Teachers must realize that simply placing students into groups does not constitute collaborative learning," observes **Wanda R. Daniel**. This is perhaps the first, important step toward successfully integrating collaborative learning activities into the classroom. "Collaborative learning is a structured learning strategy, the key word being structured," **John J. Olivo** says. "This kind of learning must be organized and have purpose."

Placing collaborative learning strategies into practice in the classroom presents teachers with a number of challenges. Over the years, both through systematic research and trial and error, educational researchers and teachers have come up with a number of essential elements that characterize effective collaborative learning environments.

A Clear Set of Specific Learning Objectives and Precise Directions for Task Completion

Educational researcher Robert J. Stahl observes that collaborative learning and collaborative learning groups are a "means to an end rather than an end in

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work teams share day-to-day responsibility for managing themselves and the work they do with a minimum of direct supervision (Caton, 1996). Today's workers are also expected to be able to handle complex information and ideas, to think critically, and to problem solve in groups with persons of various backgrounds.

At the Honda plant in Marysville, Ohio, for example, management encourages employees to form quality circles dedicated to solving specific problems involving the quality, cost, or safety of manufacturing Honda vehicles. Group members are also encouraged to participate in training sessions that teach them about such quality control tools as check sheets, bar graphs, and cause and effect diagrams. The team members may work one hour per week of overtime on their project and are rewarded with cash incentives, such as bonuses, when they come up with successful solutions to the problems. Quality, the company stresses, is the responsibility of every worker, not just upper management or job inspectors at the end of the production line.

A recent survey of employers conducted by the National Center on the Educational Quality of the Workforce found that the percentage of large companies adopting high performance team organization is growing. To increase their likelihood of hiring employees with good teamwork skills, more companies are also using preemployment tests to assess these and other soft skills, observes **Ethel Holladay**, a business teacher and coordinator of cooperative education at DuQuoin High School in DuQuoin, Illinois. Teaming is seen as an ideal way to bring top talent together on projects and to quickly and effectively communicate and act upon critical knowledge.

The speed of the decision-making process has accelerated, observes **César O. Malave**, an expert on teaming and a professor of industrial engineering at Texas A&M University in College Station, Texas. "Decisions are no longer passed from level to level in an organization. They are arrived at in a team environment." GE, for example, calls its cross-functional teams "bullet train" teams after the fast trains in Japan, where the concept of teaming originated.

The use of teams in the workplace is not likely to go away when one looks at the results, notes Caton. These results include lower manufacturing costs, higher productivity, a decrease in absenteeism, higher quality products or service, and a marked increase in profits (Caton, 1996). Such benefits, in turn, have helped contribute to the nation's growth and competitiveness, which have increased dramatically since the 1980s. In both 1994 and 1995, for example, the World Economic Forum ranked the U.S. economy as the world's most competitive. In 2001, despite the recession and terrorist attacks, the United States still ranked near the top of the list, placing second.

Providing Students With Relevant Teamwork Skills

In order to prepare students for a workplace where they will be increasingly expected to work in teams, teachers need to incorporate collaborative learning strategies into their teaching methodologies. "Collaborative learning in the classroom and team building in the business arena share many commonalities," observes **Wanda R. Daniel**, former director of business, family, and consumer science and alternative programs for the Fulton County School System in Atlanta, Georgia. "Among them are unifying around common goals, sharing resources, and celebrating victories and achievements as a group or team. The business education classroom is a natural environment in which to use the collaborative learning model."

Collaborative or cooperative learning is a teaching strategy that involves the participation of students in small group activities. Ideally, these activities are structured so that the wider skill set of the group has a distinct advantage over any single individual's efforts. Kagan, for example, has developed an approach referred to as Co-Op Co-Op, in which a main topic is divided into mini-topics that are then assigned to members of a group for individual research. The mini-topics are then compiled into a group presentation that is shared with the class.

John J. Olivo, a professor in the business education and office information systems department at Bloomsburg University in Bloomsburg, Pennsylvania, uses simple collaborative learning strategies on the first day of class to establish an active learning environment for the entire semester. Students answer questions about their major, interests, favorite foods, favorite movies, etc., on a "Tell Me About Yourself" information sheet and then share the information with their partners. Finally, each student introduces his or her partner to the rest of the class.

Sheryl Piening, an instructor at Southeast Community College in Milford, Nebraska, has her students engage in a staffing project for a hypothetical company. Students divide into groups that focus on the various aspects of the hiring process, such as writing a newspaper ad, constructing interview questions, and conducting interviews with students from a neighboring classroom. The complete staffing activity is provided on page 3.

Regardless of their complexity, the goal of all collaborative learning activities is to allow students to work together to enhance their own learning and that of their fellow teammates. Collaborative learning also has a different and distinctive approach to learning, teaching, and knowledge. The acquisition of knowledge is seen as an active process of discovery, discussion, and interaction rather than the more passive transference of information from teacher to student.

Traditionally, teachers have served as the primary dispensers of knowledge through lecturing and designing assignments and tests. In the more student-centered approach of collaborative learning, students take on a more active role and the teacher serves to facilitate and coordinate the student groups. Students and teachers share responsibility for the learning process.

Numerous studies conducted by educational researchers in diverse school settings and over wide content areas have shown that students who participate in collaborative learning projects tend to achieve higher academic scores and greater comprehension of the content and

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skills they are studying. Collaborative learning also fosters communication skills, higher-level thinking skills, and social skills. The heterogeneous teams that make up effective collaborative learning situations also prepare students to work with others from different ethnic and racial backgrounds. Indeed, one of the most consistent findings in collaborative learning studies is that they improve students' relationships with peers, especially those from different social and ethnic groups.

Other benefits of collaborative learning include improved student behavior and attendance, as well as a more positive attitude toward school. All of these factors can play a major role in a student's success in school.

While collaborative learning is relatively easy to implement and inexpensive to use, both students and teachers must be willing to take on new roles and responsibilities and to handle the initial confusion and challenges that may result from implementing this learning strategy. Caton recommends starting with short, easy-to-perform collaborative learning activities that can help pave the way toward more complex projects that facilitate the transference of teamwork skills to the workplace. Eventually, students learn to work on realistic projects in long-term groups that resemble the professional collaborations they will encounter as employees.

Preparing Well-Rounded Workers and Citizens

Precisely because no learning or teaching strategy can prepare students for all the challenges they will face as adults, neither Kagan nor Caton advocate the exclusive use of collaborative learning methods in the classroom. Kagan recommends that this learning method be incorporated with other strategies such as individualistic and competitive educational practices in order to prepare students for the full range of social and workplace situations they will encounter. The goal is to provide students with as wide a range of learning experiences as possible so that they are able to adapt quickly to the complex demands of our ever-changing society.

Olivo, for example, likes to use the 1/3 principle when creating lesson plans: 1/3 group discussion/lecture, 1/3 individual learning, and 1/3 collaborative learning.

"An ideal classroom situation includes all three modes of learning, whereby students learn to work independently, learn to compete appropriately, and learn to work collaboratively," notes Caton (1996, p. 117). ■

Staffing Activity

Students are divided into teams of four or five students. Each team completes the following tasks:

1. Write a job description for a position in your place of business. (Each team selects its type of business.) Consider an entry-level position. You will be interviewing students from a neighboring classroom.

   The job description should include the following elements:
   a. Job title
   b. Position the employee will report to, such as the supervisor
   c. Broad, general description of duties and position. Example: The automotive technician will be responsible for the maintenance and repair of vehicles.
   d. Description of at least six essential duties and tasks
   e. Difficult and demanding aspects of the job
   f. Required knowledge, skills, and abilities

   Write a newspaper advertisement for your position. The ad should be complete. Provide enough information for an applicant to contact you.

2. Develop 6–12 interview questions. Assign a point value to each. You can assign equal or unequal values to the questions. If some questions are more important than others, the more important questions should be worth more points. Also determine your criteria for assigning the points during the interview.

3. Then interview two to five candidates for the position, document interview results, and select one applicant to be hired.

4. Document the interview results in two ways.
   a. Document the points each candidate received during the interview.
   b. Write a brief explanation of the strengths and weaknesses of each candidate and provide a description of the candidate you selected for hire and an explanation of why you selected him or her.

5. After the interviews, complete a certificate for each participant.

6. At the completion of this project, you will turn in the following:
   - Job description
   - Newspaper ad
   - Questions
   - Documentation (4a and 4b)
   - Completed certificate

Provided courtesy of Sheryl Piening, Southeast Community College, Milford, Nebraska

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themselves" (1994, p. 1). Teachers should have a clear idea of what skills and knowledge they expect their students to acquire and be able to demonstrate at the end of the group task. These objectives must then be clearly communicated to the students.

"Effectively using collaborative learning in the classroom requires a tremendous amount of planning and follow-up," notes Daniel. "The teacher's role is important," says Olivo. "Before the lesson, the teacher must not only determine the lesson objective, but also the particular collaborative learning strategy to be used." The teacher should also decide on the groups' makeup—the number of students in each group and how they will be selected. The logistics of the classroom, such as the arrangement of the desks or tables, and the need for markers or easel pads are other considerations.

Olivo recommends that teachers explain the objectives and provide specific instructions *before* the students divide up into groups. Instructions should be described as clearly and precisely as possible so that students know what to do, in what order, and with what materials. Visuals can help communicate and reinforce the instructions and objectives, Olivo notes. **Joyce J. Caton** likes to define the expectations of all team projects in writing, accompanied by a rubric for how the project will be evaluated.

The student roles should also be clearly delineated, such as which students serve as the recorder, presenter, etc. The product resulting from the activity should be clear, whether it involves a presentation, report, picture, or the completion of a problem. The time limit should also be communicated.

"After the activity, the teacher should summarize what happened and connect the results to the lesson objectives," Olivo stresses.

All Students Must Accept and Support This Learning Method and the Targeted Outcome

Before embarking on any collaborative learning activity, teachers must gain their students' support for this kind of learning process. This can be challenging for some students, who for years have been accustomed to working independently and competitively. Many students may also have little experience solving open-ended problems or thinking critically in group situations. High academic achievers and introverts may also express some trepidation.

Teachers can minimize student resistance by explaining why they are using groups and by providing the necessary structure, guidance, and feedback. Explaining the benefits of collaborative learning, such as higher levels of achievement and higher grades, is also important. **César O. Maleve** brings in people from industry to talk to students about trends in the workplace and about the kinds of teams they can expect to participate in as employees.

Caton conducts discussions regarding the variety of contributions that can be made by team members based upon multiple intelligences. "For example, I make a case for 'idea' people who can brainstorm and generate a lot of good ideas but are not strong on follow-up," she says. "An idea person gets the group going and builds enthusiasm for a topic. There are other team members who enjoy doing research on the Internet or in other ways. There are still others who have graphic arts talents who can prepare visuals for the oral presentation part of the project. The goal is to develop an appreciation for a variety of contributions that all can make."

Teachers must also be willing to accept their new role as facilitators rather than dispensers of knowledge. "There's definitely some loss of control," states **Sheryl Piening**. However, teachers soon realize that their students are learning more when they discover and apply the knowledge themselves, she notes.

Teachers must also be prepared for the dynamic interaction and constant monitoring that collaborative learning requires. During class, Maleve will walk from team to team, making sure all the members are participating. "If I see a quiet student," he says, "I ask why he or she is quiet."

Heterogeneous Teams

"Teachers should form the groups rather than having students pick their own group members," stresses Caton. Students who are allowed to self-select group members often tend to base their choices on friendship or cliques. When forming groups, teachers should look for diversity to ensure that members of each group have varying skills, talents, and interests. If a group is composed entirely of strong students, for example, the members are more likely to "parcel out the work rather than engage in group discussions and informal tutoring sessions that lead to many of the proven instructional benefits of cooperative learning" (Felder, 2002, p. 1). Heterogeneous groups tend to be the most productive, notes Caton. They also tend to promote tolerance of diverse viewpoints.

At the beginning of the semester, Maleve hands out a general questionnaire. Students are asked about their interests, their computer experience, and also whether there is any particular person they do or do not want to work with. This helps Malave when he puts together the... teams. If there is someone who has an intense dislike for another person, he will try to take that into consideration. When the teams first get together, he also has them come up with their own code of cooperation.

Piening concurs as to the importance of setting up ground rules for the groups, such as what happens if someone is not present for team meetings or doesn't perform his or her tasks. Before each team meets, she provides a handout detailing the expectations and responsibilities of group members. (See page 5.) She also has them come up with a time management plan of how they will accomplish their tasks.

The number of team members should not exceed the single digits. The goal is to have enough students to promote a diversity of discussion and opinion yet few enough for everyone to pull his or her weight in the tasks to be accomplished. **Ethel Holladay** favors [illegible] odd-numbered groups of three or five to prevent deadlocks when groups take votes. However, even-numbered groups can be useful if group members need to pair off for certain tasks.

"I typically use groups of three to six students depending on the work and time period involved," notes **Janice C. Harder**, a former NBEA president and a professor of business at Motlow State Community College in Lynchburg, Tennessee. "If a project stretches across the semester, I use five or six students per group to allow for those students who may withdraw from school during the semester."

Equal Opportunity for Success

One reason teachers need to invest the time and effort to create heterogeneous groups is that every student must believe that he or she has an equal chance of learning the content and earning the group rewards for success, regardless of the group he or she is participating in. Students must not feel penalized academically by being placed in a particular group (Stahl, 1994). When students realize that they have been distributed among the groups in a fair manner, there is much less resentment, especially among high achievers, toward the collaborative learning process.

"I have used different techniques (Myers Briggs or less formalized techniques) to combine different personalities and abilities into groups," observes Harder. "I've also assigned students to groups based on where they live, since I'm at a community college with students coming from as many as 11 different counties in the surrounding area," she notes. "This facilitates their working together outside of scheduled class time."

Maleve uses a computerized system that takes into account SAT scores and grade point averages when assigning freshmen students to complex, semester-long projects. This kind of fine-tuning is less important for shorter, more informal group projects, he notes.

Positive Interpersonal Skills and Attitudes

To work together effectively as a group, team members must have skills in leadership, conflict management, constructive criticism, encouragement, trust-building, compromise, negotiation, and clarifying (Stahl, 1994). "We must not assume that students come to us with good interpersonal skills," says Harder.

While the group process itself does help to teach these skills, both Harder and Maleve recommend that teachers devote some time to teaching them. Malave, for example, sets aside four hours for teaching interpersonal skills and conflict resolution techniques. The students then divide up into their teams and learn to build on and refine these skills.

"The whole team learns that it has to come together to work out problems," Maleve notes. Indeed, part of what students are learning through group activities is how to negotiate differences and deal with other people in order to reach a common goal. "Professionalism is being able to confront and solve problems in public," says Malave. Only rarely has he had to step in to sort out the problems of truly dysfunctional teams. Since 1993, for example, he has had to split up only two teams.

Piening notes that her most common problem over the years has been students who either do nothing or everything. "Some kids are so grade conscious they feel they have to do all the tasks in order for them to be performed correctly," she says. Both problems can usually be worked out by setting up a balance between individual accountability and group accountability, also known as positive interdependence.

Expectations and Responsibilities of Group Members

- Each member listens when another member is speaking.
- Group issues are brought up within the group and not analyzed or judged "behind the scenes."
- Every member is responsible for the development of the group.
- All members must participate.
- Differences of opinion are respected.
- Ideas are examined rigorously according to agreed upon criteria.
- Dysfunctional group members are confronted.

Provided courtesy of Sheryl Piening, Southeast Community College, Milford, Nebraska

Positive Interdependence

Teachers must structure learning tasks so that students come to believe that they sink or swim together, notes Stahl. Essentially, students must depend on one another for their personal, teammates', and group's success in completing the assigned tasks and mastering the targeted content. When students know that their performance hinges upon their teammates, they make sure their members stay on task, notes Spencer Kagan (1994). Peer accountability can be a strongly motivating force, says Malave.

A well-functioning team has no single leader. Responsibility for leading the group shifts as the project progresses and those with the relevant knowledge and experience step forward to do their part. For example, in the research phase of a project, those with computer and Internet experience will take the lead. Then as the writing phase begins, those with the best writing skills will step forward.

Positive interdependence can be fostered by the task structure, notes Kagan, such as having a single team or class product—a team mural, essay, or report—that represents the collective efforts of the entire group and is graded as such. (See the Collaborative Learning With Resource and Task Interdependence activity on page 6.)

Positive interdependence can also be created by the reward structure. The team score may be an average of the individual scores or the sum of how many students reach a predetermined criterion. For example, if the team rewards depend on all members scoring 80 percent or better, notes Kagan, then the team members will work hard to make sure everyone performs above 80 percent.

Face-to-Face Interaction

Teachers need to provide the appropriate facilities—tables, chairs, etc.—to foster effective group interaction. Students need to be able to arrange themselves so that they are positioned for direct eye-to-eye and face-to-face conversations. Sitting side by side is not the same, notes Malave. Students should be able to see and respond to each other's body language and nonverbal cues. They should also be able to easily reach one piece of paper as they jot down ideas during a brainstorming session. A round table helps to facilitate face-to-face interaction, but individual desks can also be grouped into a common workspace.

A common complaint among students concerns the difficulty of being able to get together to work on their projects, notes Caton. "It is impossible to totally eliminate this problem, but I have been able to minimize it by providing some class time initially for groups to meet each other, exchange e-mail addresses, brainstorm ideas for a topic or theme, and talk about where they feel they can make the biggest contribution to ensuring successful completion of the project," she says. While face-to-face meetings are the ideal form of interac-

tion, they are not always practical. Caton suggests that her groups rely heavily on e-mail.

E-mail can also facilitate the adaptation of collaborative learning techniques for online classes, points out Piening, who teaches an online business communications course. Virtual collaboration can work if the group number is reduced. (Piening divides students into pairs.) It is also beneficial if the instructor takes some time to get to know the students—their interests and abilities—before pairing them off.

Allowing Sufficient Time for Learning and the Evolution of Group Dynamics

Scott A. Cecco, a business education teacher at Williams Valley High School in Tower City, Pennsylvania, has started a new collaborative learning project in his ninth-grade computer class. To learn how computers work, his students must completely tear down and rebuild a personal computer. "I have found that students work better in groups than alone on this project," he notes. "When they were working solo, some students were very shy and scared." There is much more excitement and energy when they work in groups.

While the benefits of collaborative learning are real and lasting, they do not necessarily show up immediately. Group dynamics refers to the mechanisms by which a group acts as a unit and not as a disjointed collection of different factions. In a well-functioning group, the accomplishments of the group may exceed many times the potential contribution of any one individual. It is this synergy that makes groups so highly valued in industry (Seitz, 2002). Good groups are noted for their cohesiveness, spirit of cooperation, and their coordination of effort toward the accomplishment of a shared goal.

It is important for teachers to allow sufficient time for groups to evolve and develop into these cohesive units. Initially, groups go through a stage of formation where the members will be guarded about their opinions. As the group members get to know each other better, there may be conflict as differences of opinion are aired. Eventually, the group discovers the merits of working together and each member feels secure about expressing his or her viewpoint. Work methods become established, and the group begins to function effectively and efficiently.

Collaborative Learning With Resource and Task Interdependence

Divide the class into teams of five students. Each team will develop a poster or collage representing its understanding of a major concept. Assign the following roles based upon students' aptitudes and interests:

Group member #1 possesses textbook, handouts, or other printed material to use as a reference. Provides information only—does not share resources.

Group member #2 has a computer with access to the Internet to locate additional resources. Shares information only—does not share access to the computer.

Group member #3 has magazines, clip art, photographs, or other sources of visual art to provide images to be placed on the poster or collage. Cuts out images that represent the group's understanding of the concept.

Group member #4 has markers, scissors, etc., to actually construct the poster or collage.

Group member #5 makes an oral presentation of the poster or collage to the class as a whole.

Provided courtesy of Joyce J. Caton, Fontbonne University, Saint Louis, Missouri

Stahl notes that it can take four or more weeks of students working together in the same heterogeneous groups for the positive social skills and attitudes, as well as the academic benefits of collaborative learning, to emerge and be retained. Maleve cautions that it can take up to 40 hours or 10 weeks for teams working on complex, semester-long projects to become cohesive units.

Individual Accountability

Individual accountability is one of the most important components of collaborative learning. Activities that provide a group grade or a group product without making each member accountable for his or her contribution do not consistently produce high achievement gains (Kagan, 1994). Each group member must be held accountable for doing his or her own share of the work and for learning the targeted skills. Teachers must also test students on an individual basis to determine whether they have mastered and retained knowledge.

Without individual accountability, a free rider or workhorse situation can develop, notes Kagan. The free rider does little or no work but accepts a team grade. The workhorse does more than his or her fair share. Providing for individual accountability is especially important for younger students, who tend to need more structure, observes **Ann L. Kieser**, an adjunct instructor in the Business Education and Office Information Systems Department at Bloomsburg University in Bloomsburg, Pennsylvania.

Teachers can structure individual accountability into collaborative learning activities in a number of different ways. In reward accountability, each student takes an individual test and may be graded primarily on his or her score. A portion of the grade may also be based on a team score.

Task accountability is another form of individual accountability in which each student is responsible to the group for his or her portion of the project. Instead of grading the project solely as a unified whole, the teacher evaluates each section. Each student then receives a grade on his or her portion of the team presentation.

"Individual accountability can be facilitated by having small groups since the smaller the group, the greater the individual accountability may be," notes Harder. "When students are working on a project, report, or class presentation, I evaluate the final product (report or presentation) and the students evaluate the contributions of each other to the group process. Both evaluations are reflected in their grade on the project."

To foster individual accountability, Daniel uses regular individual tests and oral individual presentations and assigns each group a checker who questions decisions and their rationale. In Malave's classes, team tests account for 20 to 30

percent of the final grade, and individual tests account for 70 percent of the grade.

Public Recognition and Rewards for Group Success

Groups that meet or exceed high levels of academic achievement should be recognized by the class. Points, certificates for privileges such as free time, and praise are ways for teachers to express appreciation of positive behaviors and progress toward learning goals. The inclusion of peer praise can also make learning more fun and enhance motivation. For example, the team that achieves the highest score may receive a standing ovation from classmates.

Teachers should also strive to design tasks that are intrinsically interesting and meaningful. Ultimately, students should learn to appreciate the value of the

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Team Survey

1. Describe the collaborative process as it applies to your team. Be specific: Did everyone get to voice an opinion and express an idea? Did everyone listen to others? Was criticism constructive? Did everyone share the responsibilities? What were the problems, and what was easy about the process?

2. Describe the decision-making process in your team and the content of your plans.

3. Be specific: Were members willing to compromise? Was everyone satisfied with the final product? Were some subjects more difficult than others?

4. What is your opinion of the final product produced by the team? Name at least one advantage and one disadvantage as they might apply to you or your subject area.

5. Discuss your personal reaction to the team as you experienced it, and your personal reaction to the collaborative learning process as it relates to your team. Be specific—positive or negative. Did you like the experience? Why or why not? What did you learn from the experience?

Provided courtesy of Joyce J. Caton, Fontbonne University, Saint Louis, Missouri

Classroom Management Issues

Teachers accustomed to quiet classrooms may initially be surprised at the noise level generated by group activities. One of the strengths of collaborative learning, notes Spencer Kagan, is that it taps into the natural inclinations of students. "Students want to question, discuss, argue, and share," he writes (1994, p. 1:3). Collaborative learning channels these impulses into positive academic and social outcomes. Consequently, many teachers report fewer disciplinary problems during collaborative learning activities.

Kagan notes, however, that a number of classroom management skills are particularly important to the collaborative learning environment. First of all, teachers must be able to convey directions and learning objectives as clearly yet briefly as possible in order to prevent confusion and maximize the time for students to participate in group activities. For example, rather than calling out student names one at a time when assigning them to groups, teachers can write the student names and team assignments on cards. Also rather than distributing materials to students one at a time, teachers can have one person from each team retrieve the materials and distribute them to teammates (Kagan, 1994).

The group activity must also have a level of complexity that engages students. Projects that have applications to real-world situations will tend to generate more interest. The more compelling the assignment is to a group, the more motivated the students will be to behave and operate as a team.

While teachers should not be afraid to let their students talk or even argue over a topic, they should never allow these activities to get out of hand. Students should not be allowed to yell or use inappropriate language, for example. Kagan recommends that teachers have a quiet signal, such as raising a hand or turning the lights on and off, to bring the class to order when necessary. This quiet signal should be communicated and understood by the students *before* they join their groups. "Usually the groups are quite good," observes **Sheryl Piening**. "They tend to talk in conversational tones because they do not want the other groups to hear what they are planning."

Class rules also help maintain an orderly environment regardless of the learning strategy being used. These rules should be established during the first class meeting. Rules also tend to be more effective when students participate in making them. Modeling the desired behavior for students, such as courtesy and respect, is another effective strategy that teachers can put into practice.

Perhaps most importantly, teachers should be conscientious about circulating through the classroom and monitoring students' progress as they work in their groups. This helps establish a proactive approach to emerging problems before they become disruptive to the learning process.

While they should not interfere with or interrupt the group's work, teachers should be available to coach students when they have difficulty. "I usually start the teams in class," notes Piening. "Students move into groups and begin their plan for accomplishing the team goal. I am the team facilitator. The facilitator's role is to provide direction, answers to questions, and discipline if necessary. Because the teams start in class, I can frequently detect when a team is having a problem, and I might ask the members if they need assistance. Usually, the biggest problem in the beginning is getting organized. I can provide guidance as to what activities they might consider in dealing with their problem." The responsibility for accomplishing the work remains with the students. ◻

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collaborative learning process itself. "The personal values and beliefs of each teacher, the nature of the task, and the needs of the students will dictate the extent to which some form of extrinsic motivators are included," states Kagan (1994, p. 1:5).

Postgroup Reflection on the Group Process

At the end of the group activity, students should spend some time reflecting upon how they worked together as a team. Among the areas they should reflect upon are how well they achieved their group goals, how well they worked together to facilitate each other's understanding and used positive behaviors and attitudes to achieve that understanding, and what they need to do next time to improve the performance of the group.

Olivo likes to assign a one-minute paper to obtain student feedback. On his final exams, Malave asks students to reflect on one positive thing and one negative thing about the group process. Caton uses variations of the team survey on page 7.

The reflection process can help students recognize and appreciate each other's differences and how they built on individual strengths to achieve a common goal, notes Olivo. Reflection also contributes to the goal of helping students become lifelong learners, adds Malave. "Lifelong learners have to be able to evaluate the learning process," he notes. After all, it is the key to growth and knowledge. ■

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